

Digital Processing System

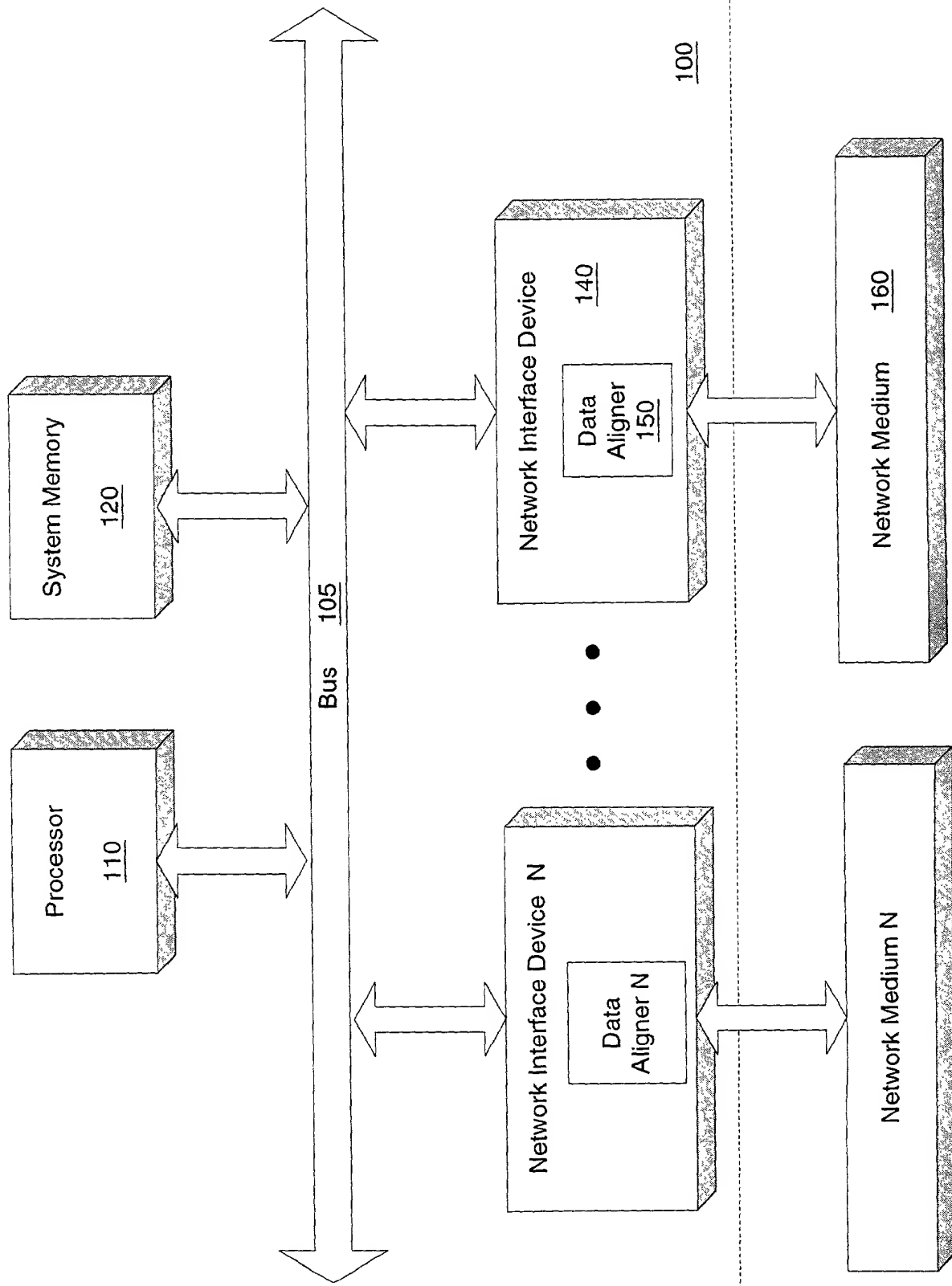


Figure 1

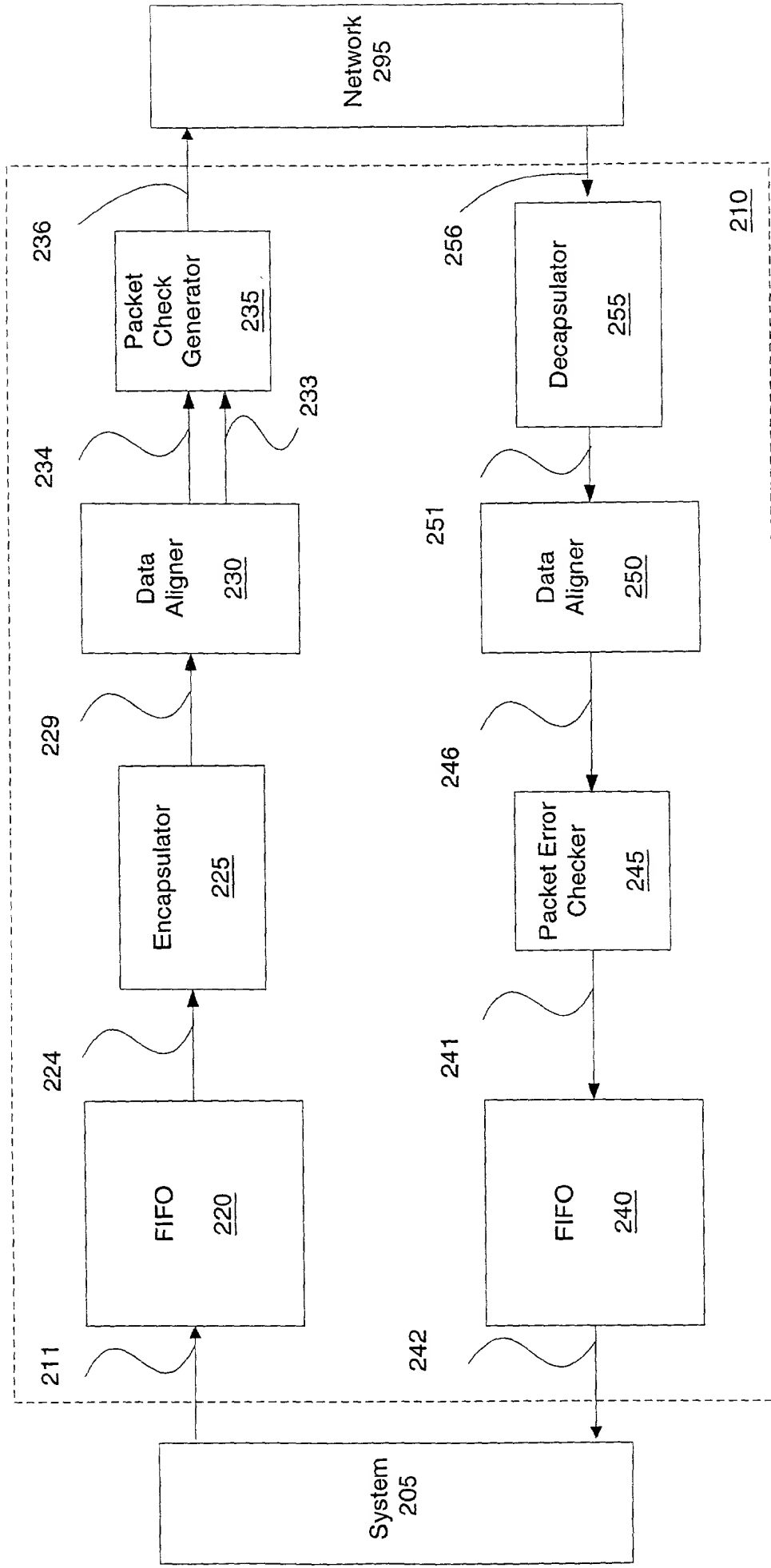


Figure 2

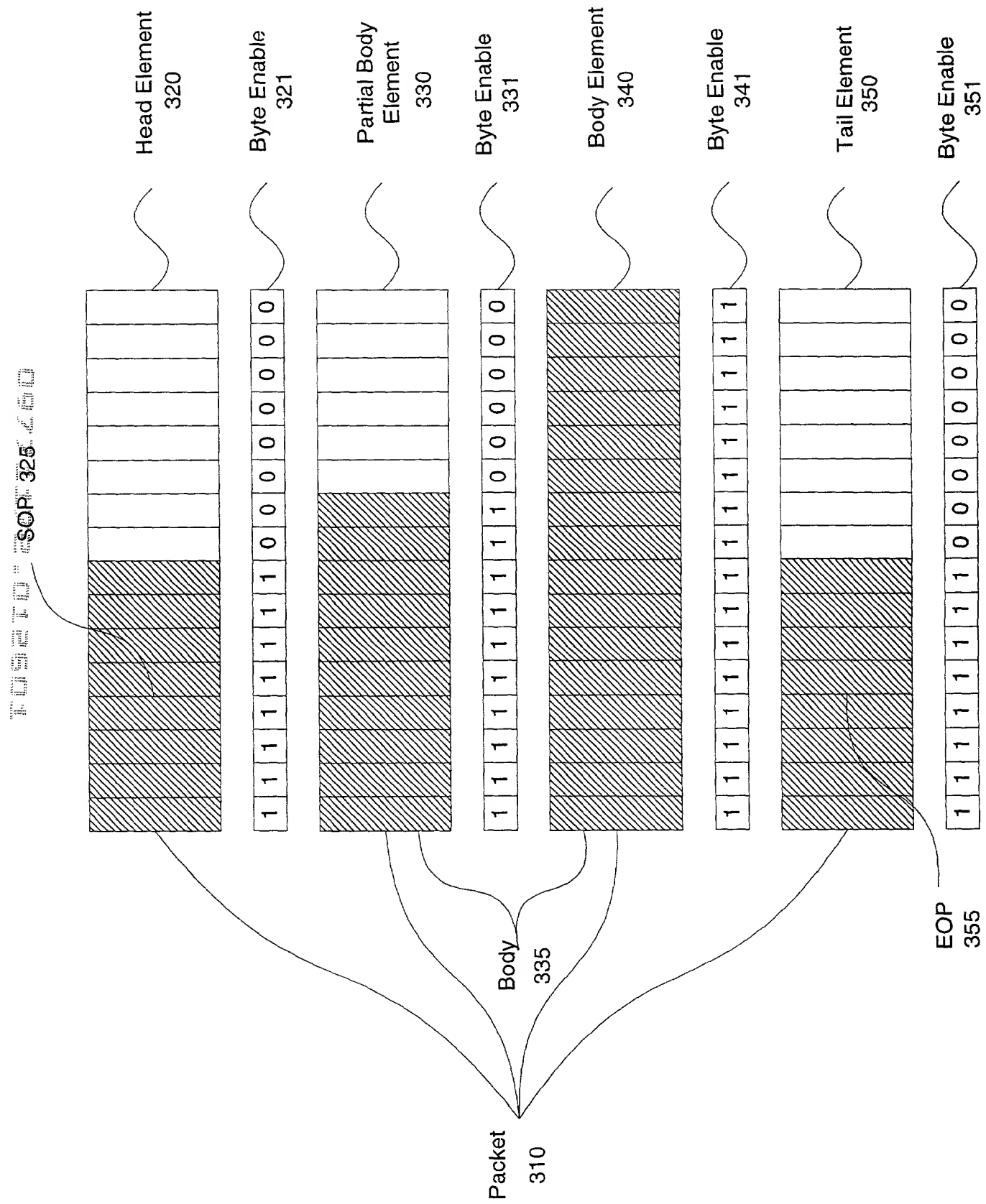


Figure 3

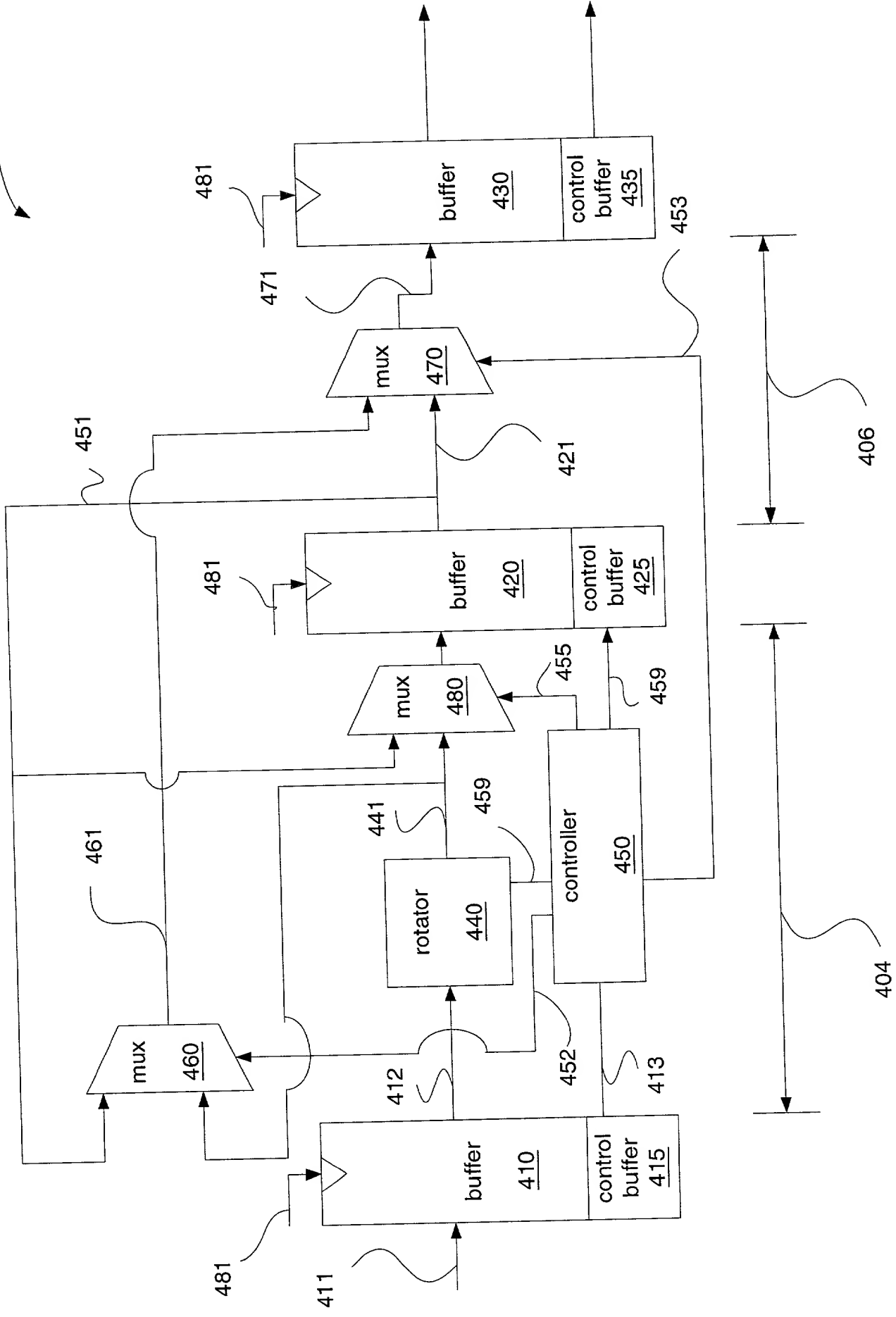


Figure 4

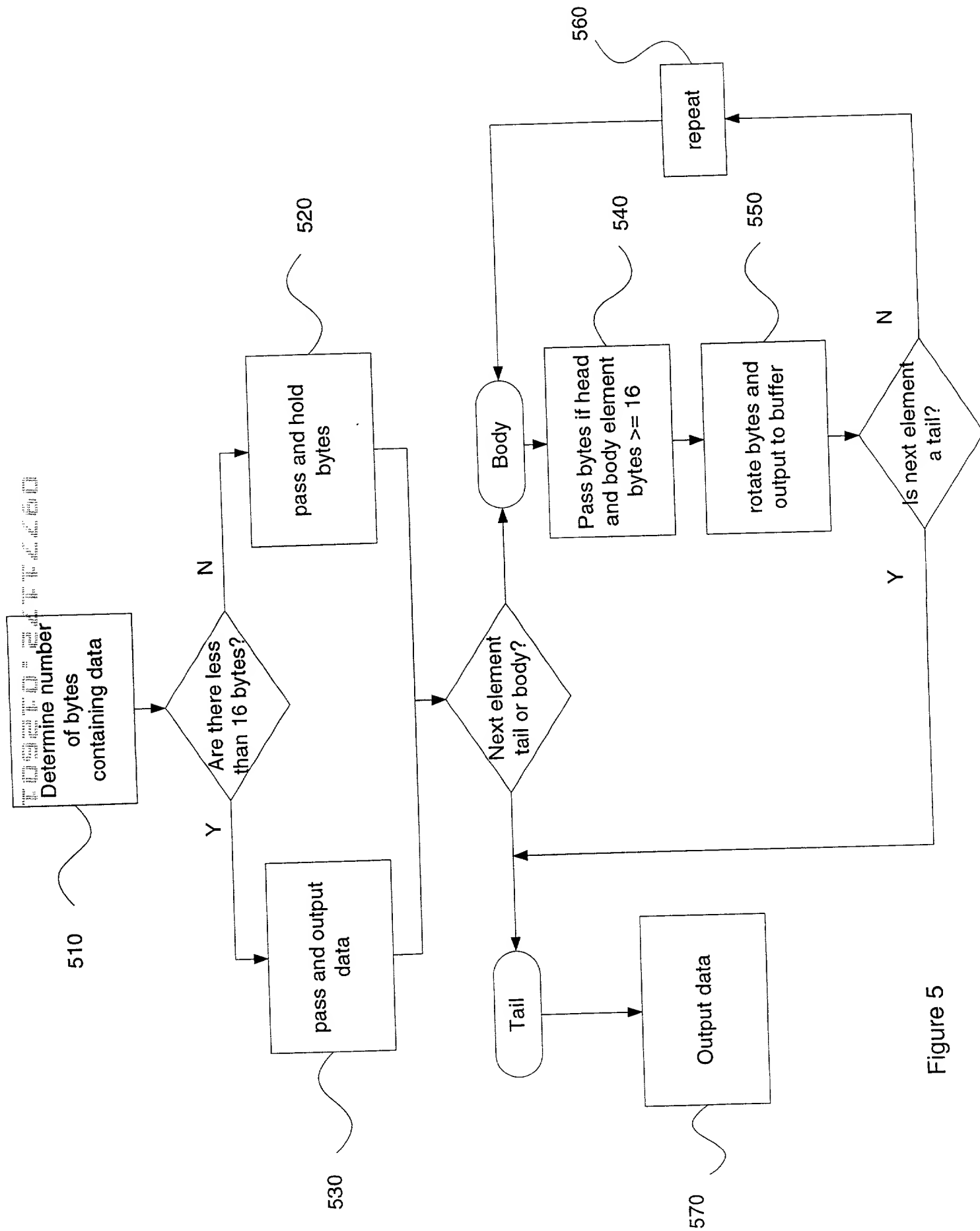


Figure 5

Complex Data stream Element	Mapped Data stream Element	Qualifier	Mapping Flow
Head	Head		Same sequence as in simple data stream
Body	Body		Same sequence as in simple data stream
Tail	Tail		Same sequence as in simple data stream
Hole	Hold		Hold state
Partial Body (Tail A)	Tail	Net Count <16	Follow tail sequence but: Suppress data aligner control output. Bypass intermediate buffer. Perform calculation using unpassed result.
Partial Body (Tail B)	Tail	Net Count >=16	Follow tail sequence but: Do not suppress byte enables, SOP. Suppress generation of EOP control signal. No bypass for computation.

Figure 6

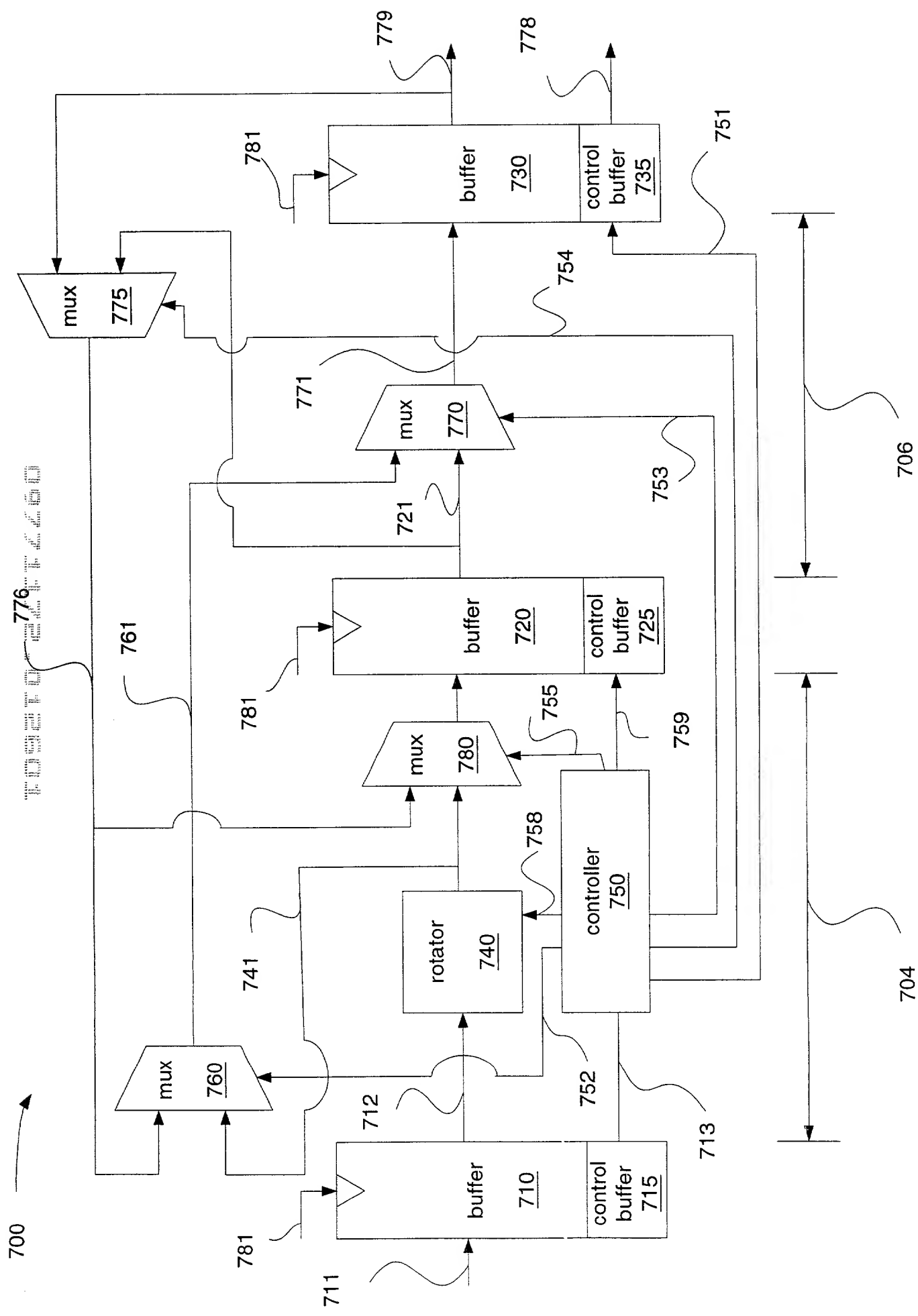


Figure 7

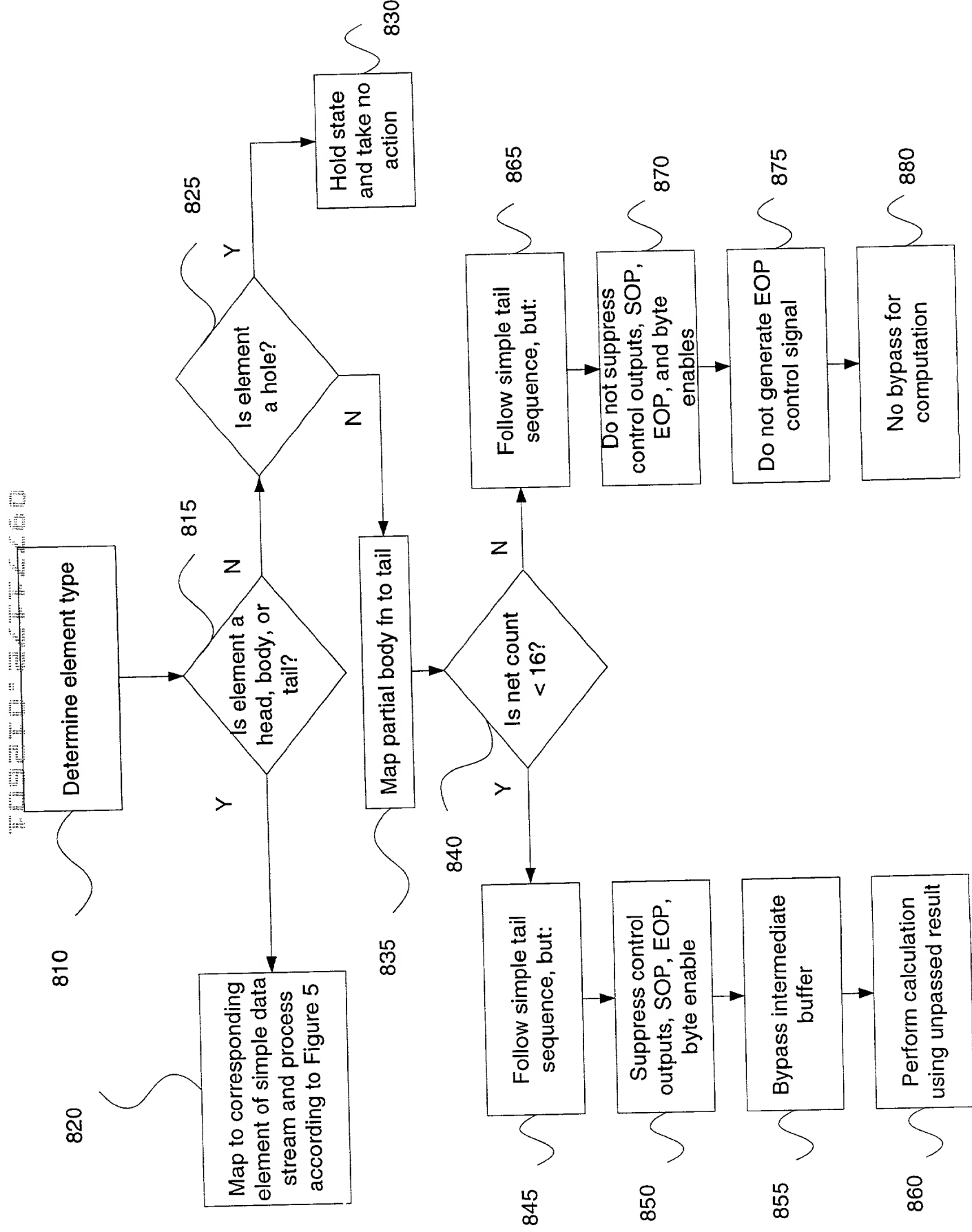


Figure 8



900

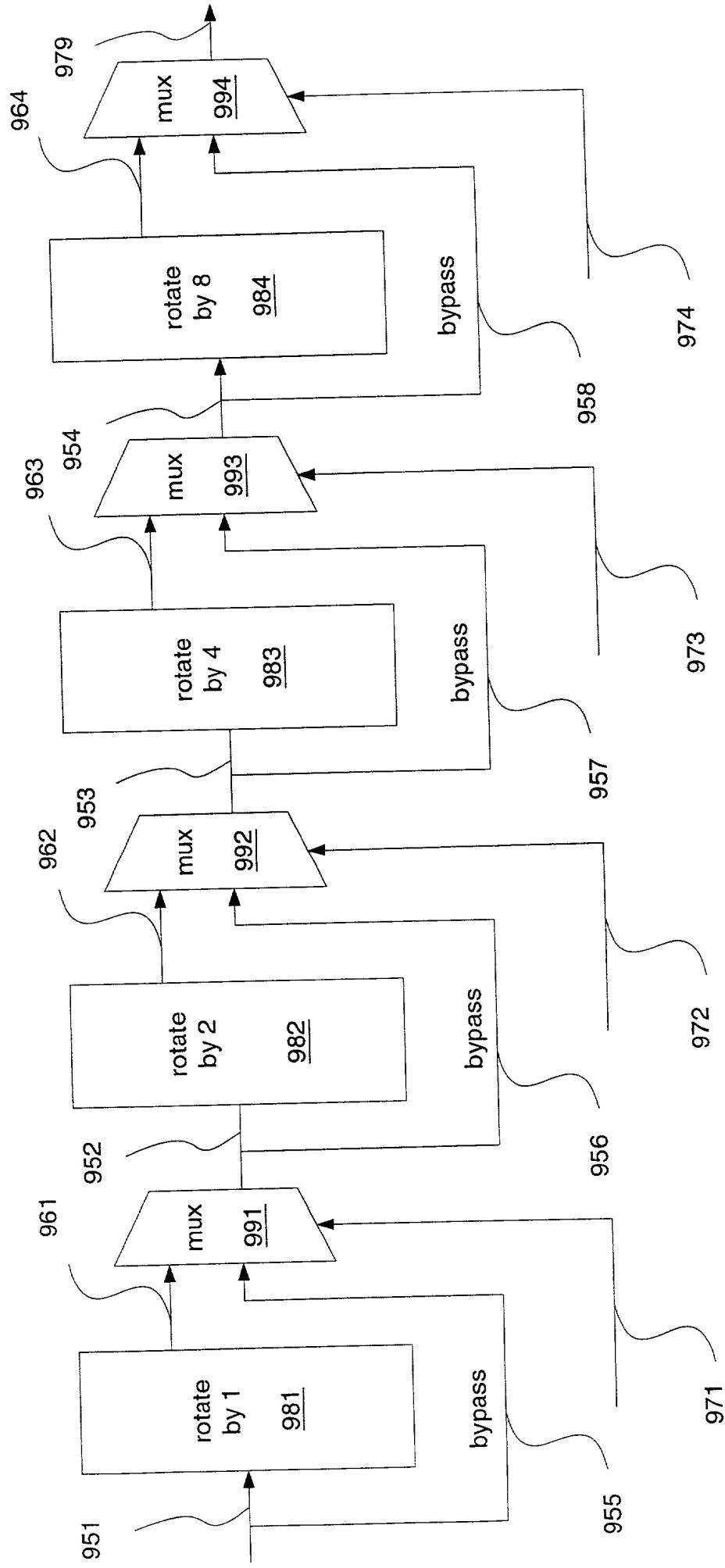


Figure 9

Serial Number	Shift Amount Value	Value of the Mux Control signal mxcntl[15:0]
1	4'b0000	16'b0000000000000000
2	4'b0001	16'b1000000000000000
3	4'b0010	16'b1100000000000000
4	4'b0011	16'b1110000000000000
5	4'b0100	16'b1111000000000000
6	4'b0101	16'b1111100000000000
7	4'b0110	16'b1111110000000000
8	4'b0111	16'b1111111000000000
9	4'b1000	16'b1111111100000000
10	4'b1001	16'b1111111110000000
11	4'b1010	16'b1111111111000000
12	4'b1011	16'b1111111111100000
13	4'b1100	16'b1111111111110000
14	4'b1101	16'b1111111111111000
15	4'b1110	16'b1111111111111100
16	4'b1111	16'b1111111111111110

FIGURE 10

Rotate_Amount	Input	Output
0	{ ABCDEFGHIJKLMNOP }	{ ABCDEFGHIJKLMNOP }
1	{ ABCDEFGHIJKLMNOP }	{ PABCDEFGHIJKLMNO }
2	{ ABCDEFGHIJKLMNOP }	{ OPABCDEFGHIJKLMN }
3	{ ABCDEFGHIJKLMNOP }	{ NOPABCDEFGHIJKLM }
4	{ ABCDEFGHIJKLMNOP }	{ MNOPABCDEFGHIJKL }
5	{ ABCDEFGHIJKLMNOP }	{ LMNOPABCDEFGHIJK }
6	{ ABCDEFGHIJKLMNOP }	{ KLMNOPABCDEFGHIJ }
7	{ ABCDEFGHIJKLMNOP }	{ JKLMNOPABCDEFGHI }
8	{ ABCDEFGHIJKLMNOP }	{ IJKLMNOPABCDEFGH }
9	{ ABCDEFGHIJKLMNOP }	{ HIJKLMNOPABCDEFG }
10	{ ABCDEFGHIJKLMNOP }	{ GHIJKLMNOPABCDEF }
11	{ ABCDEFGHIJKLMNOP }	{ FHIJKLMNOPABCDE }
12	{ ABCDEFGHIJKLMNOP }	{ EFGHIJKLMNOPABCD }
13	{ ABCDEFGHIJKLMNOP }	{ DEFGHIJKLMNOPABC }
14	{ ABCDEFGHIJKLMNOP }	{ CDEFGHIJKLMNOPAB }
15	{ ABCDEFGHIJKLMNOP }	{ BCDEFGHIJKLMNOPA }

FIGURE 11